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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,386	01/14/2004	Jean-Luc Cabioch	033818-032	1882

21839 7590 01/04/2008
BUCHANAN, INGERSOLL & ROONEY PC
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

TESKIN, FRED M.

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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01/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/756,386	CABIOCH ET AL.	
	Examiner	Art Unit	
	Fred M. Teskin	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-26 and 29-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-22, 24-26, 29, 31-35, 37, 39 and 49 is/are allowed.
- 6) ☒ Claim(s) 6-14, 23 and 40-48 is/are rejected.
- 7) ☒ Claim(s) 30, 36, 38, 50 and 51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 19, 2007 has been entered. Accordingly, claims 6-26 and 29-51 are currently pending and under examination.

The indicated allowability of claims 6, 12 and 40-43 is withdrawn in view of the newly discovered prior art to Zelinski and Hellermann et al. Rejections based on the new references follow.

Claims 30, 36, 38, 50 and 51 are objected to because of the following informalities: Claim 30 (and claims dependent thereon) improperly depends from a cancelled claim (i.e., claim 1; see claim 30 at line 3). Appropriate correction is required.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 6-14, 23 and 40-48 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either of US 3301840 ("Zelinski") and US 50083343 ("Hellermann").

The cited documents each disclose rubbery or elastomeric homopolymer of butadiene or copolymer of butadiene and styrene made by anionic polymerization using a catalytic system comprising n-butyllithium as catalyst and specific diether compounds as cocatalyst or polar modifier, in proportions corresponding to molar ratios (polar agent:initiator) within claims 13 and 14. See Zelinski Example III, Run Nos. 23-28 and Hellermann, Examples 2, 5-7 and 9 in Tables 1 and 2. Notably, in Run Nos. 27-28 of Zelinski, the polar compound 1,2-dimethoxyethane is used at a level of 25 parts by weight together with 4.0 mmol n-butyllithium. From the reported amount and molecular weight of 1,2-dimethoxyethane (90 g/mol), the corresponding molar concentration is calculated to be 0.28 mole or 280 mmol; hence the molar ratio of polar compound to catalyst (initiator) is 280:4, or 70. And in the cited examples of Hellermann, the stated quantities of diether compound (BEE or BPE) and catalyst (LiBu) equate to molar ratios (polar agent:initiator) greater than 8 (e.g., 9.4 and 10.4 in Examples 2 and 7, respectively) and a coupling agent (DVB or SiCl₄) is added following the initial reaction. The coupler is said to provide "star-shaped polymers" (col. 5, ll. 24-27), which is consistent with a "branched" structure as recited in claims 8-14 and 45-48.

Neither Zelinski nor Hellermann explicitly disclose the claimed parameters relating to mass content of cyclic vinyl units and number-average molecular weight of the linear or branched diene elastomer. These properties, however, are the stated result of polymerizing at least one conjugated diene monomer according to the claimed process (*cf.*, claims 13 and 14). Both documents describe diene elastomers produced by essentially the same process, i.e., by anionically (co)polymerizing butadiene using

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species of diether compound and organolithium catalyst at molar ratios within claims 13 and 14, the reaction being carried out batchwise (as in the cited working examples) or continuously (as per Zelinski at col. 3, ll. 65+ and Hellermann at col. 5, ll. 40-42). In addition, the use of even higher cocatalyst/catalyst ratios is explicitly contemplated by Hellermann (e.g., 30:1; see col. 5, ll. 10-12). Given the correspondence in polymerization conditions, a plausible basis exists for inferring the butadiene elastomers produced per the cited examples of Zelinski or Hellermann intrinsically possess the undisclosed properties of applicants' diene elastomer as claimed.

Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness is established. *In re Best*, 195 USPQ 430, 433 (CCPA 1977). When there is sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not. *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Applicants' arguments filed December 19, 2007 have been fully considered but are deemed moot in view of the new grounds of rejection.

Claims 15-22, 24-26, 29-39 and 49-51 are free of the prior art. Claims 15-22, 24-26, 29, 31-35, 37, 39, 49 are allowable. Claims 30, 36, 38, 50 and 51 would be allowable if amended or rewritten to overcome the objection set forth in this Office action and to include all the limitations of the base claim and any intervening claim.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMTeskin/12-28-07


FRED TESKIN
PRIMARY EXAMINER
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